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Abstract

A directly injecting internal combustion engine (1) has at least one cylinder (4) which has a combustion space (5) and in which a piston (6) executes an oscillating movement, and an injection nozzle (7) for the injection of fuel into the combustion space (5). A piston (6) has a piston recess (10) which has in its central region an elevation extending in the direction of a cylinder head (3). A surface (13) of the piston recess (10) which adjoins the elevation (11) in the direction of the recess edge (12) is connected to the elevation (11) via a radius (14) in such a way that an injection jet (9a) impinging in this region and injected at the earliest possible time point is distributed both in the direction of the elevation (11) and in the direction of the recess edge (12). The surface (13) adjoining the elevation (11) in the direction of the recess edge (12) has an extent in the direction of the recess edge (12) such that an injection jet (9b) injected at the latest possible time point impinges onto the surface (13). The injection jet (9b) injected at the latest possible time point is distributed both in the direction of the elevation (11) and in the direction of the recess edge (12).

(Fig. 1)